

WHAT IS CLAIMED IS:

1. A copying machine comprising:

a reading unit which reads a document to generate image
5 data;

a reducing unit which reduces the image data at a
predetermined reduction ratio to generate reduced image data;
and

a recording unit which forms an image in a predetermined
10 recording area on a recording medium on the basis of one of
the image data generated by the reading unit and the reduced
image data generated by the reducing unit, wherein:

at least when the recording unit forms the image on the
basis of the reduced image data, the reading unit reads an
15 extended reading area of the document larger than the recording
area.

2. The copying machine according to claim 1, wherein
when the reducing unit is not used, the reading unit reads an
20 area of the document equal to the recording area.

3. The copying machine according to claim 1, wherein
when the recording unit forms the image on the basis of the
image data generated by the reading unit, the reading unit reads
25 an area of the document equal to the recording area.

4. The copying machine according to claim 1, wherein
when the recording unit forms the image on the basis of the
image data generated by the reading unit, the reading unit reads
5 the extended reading area of the document.

5. The copying machine according to claim 1, wherein
the extended reading area of the document is an area larger
in a main scanning direction than the recording area of the
10 recording medium.

6. The copying machine according to claim 1, wherein
a ratio of a length of the recording medium in a sub-scanning
direction to a length of the document in the sub-scanning
15 direction is set as the reduction ratio.

7. The copying machine according to claim 6, wherein
the reading unit detects the length of the document in the
sub-scanning direction.

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8. The copying machine according to claim 1, wherein
a value in proportion to a ratio of a length of the recording
medium in a sub-scanning direction to a length of the image
data in the sub-scanning direction is set as the reduction ratio.

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9. The copying machine according to claim 1, wherein a ratio of a length of the recording medium in a main scanning direction to a length of the document in the main scanning direction is set as the reduction ratio.

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10. The copying machine according to claim 1, wherein when the reading unit detects a length of the document in a sub-scanning direction greater than or equal to a predetermined threshold value, the reduction ratio is set to a predetermined value.

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11. The copying machine according to claim 1, further comprising:

a buffer which temporarily stores the image data generated by the reading unit before outputting the image data to the reducing unit or the recording unit; and

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a preparatory reducing unit which thins out the image data before storing the image data in the buffer.

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12. A copying method comprising:

reading a document to generate image data;

reducing the image data at a predetermined reduction ratio to generate reduced image data; and

forming an image in a predetermined recording area on a recording medium on the basis of one of the image data generated

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in the reading and the reduced image data generated in the reducing, wherein:

at least when in the forming, the image is formed on the basis of the reduced image data, an extended reading area of the document, which is larger than the recording area, is read
5 in the reading.

13. The copying method according to claim 12, wherein when the reducing is not performed, an area of the document
10 equal to the recording area is read in the reading.

14. The copying method according to claim 12, wherein the image is formed on the basis of the image data in the recording, an area of the document equal to the recording area is read
15 in the reading.

15. The copying method according to claim 12, wherein when the image is formed on the basis of the image data in the recording, the extended reading area of the document is read
20 in the reading.

16. The copying method according to claim 12, wherein the extended reading area of the document is an area larger in a main scanning direction than the recording area of the
25 recording medium.

17. The copying method according to claim 12, further comprising:

5 setting a ratio of a length of the recording medium in a sub-scanning direction to a length of the document in the sub-scanning direction as the reduction ratio.

18. The copying method according to claim 17, further comprising:

10 detecting the length of the document in the sub-scanning direction.

19. The copying method according to claim 12, further comprising:

15 setting a value in proportion to a ratio of a length of the recording medium in a sub-scanning direction to a length of the image data in the sub-scanning direction as the reduction ratio.

20 20. The copying method according to claim 12, further comprising:

 a ratio of a length of the recording medium in a main scanning direction to a length of the document in the main scanning direction as the reduction ratio.

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21. The copying method according to claim 12, further comprising:

detecting a length of the document in a sub-scanning direction; and

5 setting the reduction ration to a predetermined value.
when the length of the document in the sub-scanning direction
is greater than or equal to a predetermined threshold value.

22. A copying machine comprising:

10 a reduction ratio setting section which sets a reduction
ratio;

a control section which compares the reduction ratio with
a threshold value;

15 an effective area setting section which detects a length
of a document in a main scanning direction to set an effective
area;

a reading section which reads the document to generate
image data;

20 a data processing section which reduces the image data
on the basis of a comparison result provided by the control
section, the image data, and the effective area; and

a recording section which forms an image on a recoding
area of a recording medium on the basis of the image data reduced
by the data processing section.

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23. The copying machine according to claim 22, wherein when the control section determines that the reduction ratio is smaller than the threshold value, the effective area setting section sets the effective area to be larger than the recording
5 area.

24. The copying machine according to claim 22, wherein when the control section determines that the reduction ratio is greater than or equal to the threshold value, the effective
10 area setting section sets the effective area to correspond to the recording area.

25. The copying machine according to claim 22, wherein when the control section determines that the reduction ratio
15 is greater than or equal to the threshold value, the data processing section discards a portion of the reduced image data, which is out of the recording area, and the recoding section forms the image on the basis of the remaining reduced image data.

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26. The copying machine according to claim 22, wherein the effective area setting section sets the effective area so that a length of the effective area in the main scanning direction is larger than the detected length of the document in the main
25 scanning direction.

27. The copying machine according to claim 22, wherein the effective area setting section sets the effective area so that a length of the effective area in the main scanning direction is larger than a length of the recording area of the recording medium in the main scanning direction.

28. The copying machine according to claim 22, wherein the reduction ratio setting section sets a ratio of a length of the recording medium in a sub-scanning direction to a length of the document in the sub-scanning direction as the reduction ratio.

29. The copying machine according to claim 22, wherein the reduction ratio setting section sets a value in proportion to a ratio of a length of the recording medium in a sub-scanning direction to a length of the image data in the sub-scanning direction as the reduction ratio.

30. The copying machine according to claim 22, wherein the reduction ratio setting section sets a ratio of a length of the recording medium in a main scanning direction to a length of the document in the main scanning direction as the reduction ratio.

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